

Amendments to the Claims

Claim 1 (Currently Amended) A multiple decoding apparatus for receiving a signal composed of a plurality of encoded data and for simultaneously decoding two or more of the encoded data, the multiple decoding said apparatus comprising:

 a reproduction controller for outputting various types of control information related to decoding and reproduction of the data;

 a data extractor for receiving the signal and for extracting the two or more encoded data designated by the control information;

 a buffer storing the two or more encoded data extracted by said data extractor;

 a buffer manager for controlling said buffer in accordance with the control information for said buffer;

 a data flow controller for distributing the two or more encoded data stored in said buffer for each data type and transferring the two or more encoded data in accordance with provided transfer conditions;

 a plurality of separate buffers for respectively storing the two or more encoded data distributed and transferred by said data flow controller;

 a separate buffer manager for controlling output of the two or more encoded data respectively stored in outputs of said plurality of separate buffers so as to be associated with each other in accordance with information for specifying said plurality of separate buffers;

 a plurality of decoders respectively corresponding to said plurality of separate buffers for decoding the two or more encoded data stored in said plurality of separate buffers and outputting two or more the decoded data; and

 a decoding controller for selecting a separate buffer and a decoder, which are used for the decoding, according to a usage status of said decoder from among said plurality of separate buffers and said plurality of decoders in accordance with the control information, and outputting information related to said separate buffer selected by said decoding controller, the transfer conditions based on said separate buffer selected by said decoding controller, and an instruction to start the decoding, respectively, to said separate buffer manager, said data flow controller, and said decoder selected by said decoding controller,

wherein said buffer manager outputs, when said buffer becomes full of the two or more encoded data, an overflow notification to said reproduction controller,

wherein said reproduction controller outputs, upon receipt of the said overflow notification, an instruction to stop the data extraction to said data extractor, and outputs an initialization instruction to said decoding controller,

wherein said decoding controller outputs, upon receipt of the initialization instruction from said reproduction controller, an instruction to initialize all of said plurality of separate buffers to said separate buffer manager, outputs to said buffer manager an instruction to initialize said buffer to said buffer manager, and respectively outputs instructions to stop the decoding to all of said plurality of decoders,

wherein said buffer manager initializes said buffer in accordance with the initialization instruction from said decoding controller,

wherein said separate buffer manager initializes all of said plurality of separate buffers in accordance with the initialization instruction from said decoding controller, and

wherein the multiple decoding apparatus resumes all the processing which was is stopped when said buffer became full is resumed after all said buffer and said plurality of separate buffers are initialized.

Claim 2 (Canceled)

Claim 3 (Currently Amended) The multiple decoding apparatus according to claim 1, wherein
said separate buffer manager outputs, when a specific separate buffer becomes full of the data, an overflow notification that said the specific separate buffer overflows to said decoding controller,

 said decoding controller outputs, upon receipt of the overflow notification that said specific separate buffer overflows, an instruction to stop the data transfer to said specific separate buffer to said data flow controller, outputs an instruction to stop the decoding to a decoder corresponding to said specific separate buffer, and outputs to said separate buffer manager an instruction to initialize said specific separate buffer to said separate buffer manager,

 said separate buffer manager initializes said specific separate buffer in accordance with the initialization instruction from said decoding controller, and

the multiple decoding apparatus resumes all the processing which was stopped as a result of said specific separate buffer becoming full is resumed after said specific separate buffer is initialized.

Claim 4 (Currently Amended) The multiple decoding apparatus according to claim 1, wherein said separate buffer manager outputs, when a specific separate buffer becomes full of the data, an overflow notification that said specific separate buffer overflows to said decoding controller,

 said decoding controller outputs, upon receipt of the overflow notification that said specific separate buffer overflows, an instruction to discard the encoded data directed toward said specific separate buffer to said data flow controller, outputs an instruction to stop the decoding to a decoder corresponding to said specific separate buffer, and outputs an instruction to initialize said specific separate buffer to said separate buffer manager,

 said separate buffer manager initializes said specific separate buffer in accordance with the initialization instruction from said decoding controller, and

the multiple decoding apparatus resumes all the processing which was stopped as a result of said specific separate buffer becoming full is resumed, and the discard of the encoded said data is released after said specific separate buffer is initialized.

Claim 5 (Currently Amended) A multiple decoding method, in which a signal composed of a plurality of encoded data is inputted, for simultaneously decoding two or more of the encoded data from a signal composed of a plurality of encoded data, the multiple decoding method comprising:

 selecting a plurality of decoders for performing decoding and a plurality of separate buffers corresponding to the plurality of decoders, respectively, according to usage status of the plurality of decoders;

 inputting the signal and extracting the two or more encoded data to be decoded and reproduced from the signal;

 storing the extracted two or more encoded data in a buffer;

 distributing the two or more encoded data stored in the buffer for each data type and respectively storing the two or more encoded data in the a plurality of separate buffers;

controlling output of the two or more encoded data stored in the plurality of separate buffers such that the two or more encoded data stored in the plurality of separate buffers are associated with each other; and

decoding, responsive to said controlling, the two or more encoded data stored in the plurality of separate buffers and outputting two or more the decoded data,

wherein, when the said buffer becomes full of the two or more encoded data:

stopping said extracting extraction and said decoding of the data;

initializing the all said buffer and the said plurality of separate buffers; and

resuming all the processing which was is stopped as a result of the buffer becoming full after all said initializing of the buffer and the said plurality of separate buffers are initialized.

Claim 6 (Canceled)

Claim 7 (Currently Amended) The multiple decoding method according to claim 5, further comprising, when a specific separate buffer becomes full of the data:

stopping said distributing the distribution of the encoded data into the specific separate buffer and said the decoding of the encoded data stored in the specific separate buffer;

initializing the specific separate buffer; and

resuming all the processing which was is stopped when the specific separate buffer became full after said initializing of the specific separate buffer is initialized.

Claim 8 (Currently Amended) The multiple decoding method according to claim 5, further comprising, when a specific separate buffer becomes full of the data:

discarding the encoded data directed toward the specific separate buffer;

stopping said decoding of the encoded data stored in the specific separate buffer;

initializing the specific separate buffer; and

resuming all the processing which was is stopped when the specific separate buffer became full after said initializing of the specific separate buffer is initialized, and releasing the discard of the encoded data.